

Claims

- [1] An electronic transaction system, being connected to a transaction terminal and a certification mobile terminal through a network and performing transactions according to a user request, comprising:
a transaction processor for performing a transaction according to a request provided by the transaction terminal;
a message sender for receiving a transaction history from the transaction terminal, and transmitting a message which notifies receipt of the transaction history to the certification mobile terminal which corresponds to a mobile phone number provided by the transaction terminal;
a transaction history sender for providing the transaction history to the certification mobile terminal when the certification mobile terminal receives the message and performs an access;
a certifier for receiving the digitally signed transaction history from the certification mobile terminal, and verifying the digitally signed transaction history;
and
a service provider for providing a service corresponding to the transaction to the transaction terminal when the transaction history is verified.
- [2] The electronic transaction system of claim 1, further comprising a history database for storing mobile phone numbers and corresponding transaction histories for respective users,
wherein the transaction history sender uses the phone number of the accessing certification mobile terminal to find a corresponding transaction history from the history database and transmit the transaction history to the certification mobile terminal.
- [3] The electronic transaction system of claim 1, further comprising a certification authority server for issuing digital certificates,
wherein the certification mobile terminal receives a digital certificate from the certification authority server.
- [4] The electronic transaction system of claim 1, wherein the message includes link information for accessing the electronic transaction system.
- [5] The electronic transaction system of claim 1, wherein the message is transmitted in the short message service (SMS) or multimedia messaging service (MMS) format.

- [6] A certification mobile terminal, connected to a service providing server and a certification authority server through a network and performing certification for settling transactions between a user's transaction terminal and the service providing server, comprising:
a certificate receiver for accessing the certification authority server and receiving a digital certificate;
a storage unit for storing the digital certificate;
a transaction history receiver for receiving a message which notifies provision of the transaction history by the transaction terminal from the service providing server, accessing the service providing server, and receiving the transaction history; and
a digital signature processor for digitally signing the transaction history with the digital certificate stored in the storage unit, and providing the digitally signed transaction history to the service providing server.
- [7] A certification mobile terminal, being connected to a user's transaction terminal through a network and performing certification for settling a transaction between the transaction terminal and a service provider, comprising:
a storage unit for storing a digital certificate;
an interface for communicating with the transaction terminal; and
a digital signature processor for receiving a transaction history from the transaction terminal through the interface, digitally signing the transaction history with a digital certificate stored in the storage unit, and transmitting the digitally signed transaction history to the transaction terminal through the interface.
- [8] A certification mobile terminal, being connected to an off-line service providing system through a network and performing certification for settling transactions between a user and the service providing system, comprising:
a storage unit for storing digital certificates;
an interface for communicating with the service providing system; and
a digital signature processor for providing a digital certificate stored in the storage unit to the service providing system through the interface according to a user request.
- [9] The certification mobile terminal of claim 7 or 8, wherein the certification mobile terminal is connected to a certification authority server through the network, and accesses the certification authority server to receive the digital

certificate and store the same in the storage unit.

- [10] The certification mobile terminal of claim 6 or 7, further comprising a display and an input unit,
wherein the digital signature processor requests input of a password through the display when receiving a transaction history, and generates a digital signature key and digitally signs the transaction history when the password input by the input unit corresponds to the password included in the digital certificate stored in the storage unit.
- [11] The certification mobile terminal of claim 7 or 8, wherein the interface transmits the transaction history according to an infrared communication method.
- [12] An electronic transaction method for a system connected to a user's transaction terminal and a certification mobile terminal through a network and performing transactions according to the user's request, the method comprising:
(a) inquiring about a certification method for settling a transaction when the user requests a transaction through the transaction terminal;
(b) transmitting a message which notifies receipt of a transaction history to a certification mobile terminal which corresponds to a mobile phone number specified by the user when the user selects a digital certificate based certification and provides the transaction history;
(c) providing the transaction history to the certification mobile terminal when the certification mobile terminal receives the message and performs an access;
(d) receiving a digitally signed transaction history from the certification mobile terminal, and verifying the digitally signed transaction history; and
(e) providing a service to the transaction terminal according to the transaction when the transaction history is verified.
- [13] An electronic transaction method for performing transactions with a service providing server on a network, comprising:
(a) allowing a user to use a transaction terminal to access the service providing server and request a transaction;
(b) allowing the transaction terminal to transmit a transaction history to a certification mobile terminal storing a digital certificate;
(c) allowing the certification mobile terminal to use the digital certificate and digitally sign the transaction history, and transmit the digitally signed transaction history to the transaction terminal;
(d) allowing the transaction terminal to transmit the digitally signed transaction

history to the service providing server; and

(e) allowing the transaction terminal to receive a service from the service providing server according to the digitally signed transaction history.

[14] The electronic transaction method of claim 12 or 13, further comprising:
allowing the certification mobile terminal to access a certification authority server on the network and receive a digital certificate.

[15] A method for transacting with an off-line service providing system, comprising:
(a) allowing a user to select one of the transactions provided by the service providing system;
(b) allowing the service providing system to certify the user when a certification mobile terminal storing a digital certificate transmits the digital certificate to the service providing system; and
(c) allowing the service providing system to provide a service according to the transaction selected by the user when the user is certified.

[16] The method of claim 15, wherein the digital certificate is transmitted to the service providing system from the certification mobile terminal according to an infrared communication method.